

**Product Texts**

NORYL™ N300X resin is a non-reinforced blend of polyphenylene ether (PPE) + high impact polystyrene (HIPS). This injection moldable grade contains non-brominated, non-chlorinated flame retardant and carries a UL94 flame rating of 5VA at 2mm and V0 at 1.5mm. NORYL N300X resin offers strong electrical performance, low moisture absorption, dimensional stability, and hydrolytical stability. This material is an excellent candidate for indoor and outdoor electrical enclosure and solar / photovoltaic junction box applications.

UL Yellow Card Link [E121562-627664](https://www.ul.com/yellow-card/E121562-627664)

Processing/Physical Characteristics	Value	Unit	Test Standard
<b>ISO Data</b>			
Melt volume-flow rate, MVR	7	cm <sup>3</sup> /10min	ISO 1133
Temperature	280	°C	-
Load	5	kg	-
<b>ASTM Data</b>			
Melt Flow Index, MFI	7.4	g/10min	ASTM D 1238
Temperature	280	°C	-
Load	5	kg	-

Mechanical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Tensile Modulus	2220	MPa	ISO 527
Yield stress	75	MPa	ISO 527
Yield strain	5.2	%	ISO 527
Stress at break	66	MPa	ISO 527
Strain at break	13	%	ISO 527
Flexural modulus	2520	MPa	ISO 178
Flexural strength	112	MPa	ISO 178
Izod notched impact strength, +23°C, 4mm	15	kJ/m <sup>2</sup>	ISO 180/1A
<b>ASTM Data</b>			
Tensile Modulus	2380	MPa	ASTM D 638
Tensile Strength at Yield	74	MPa	ASTM D 638
Tensile Strength at Break	73	MPa	ASTM D 638
Elongation at Yield	5.3	%	ASTM D 638
Elongation at Break	7.6	%	ASTM D 638
Flexural Modulus	2650	MPa	ASTM D 790
Rockwell Hardness	R 119	-	ASTM D 785
Izod Impact notched, 1/8 in	190	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	55	J/m	ASTM D 256
Temperature	-30	°C	-

Thermal properties	Value	Unit	Test Standard
<b>ISO Data</b>			
Vicat softening temperature, B	162	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	164	°C	ISO 306
Burning behav. at 1.5 mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	-
Burning behav. 5V at thickness h	5VA	class	IEC 60695-11-20
Thickness tested	2.0	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (GWIT)	825	°C	IEC 60695-2-13
GWIT - thickness tested (1)	1	mm	-
Glow Wire Ignition Temperature (GWIT)	825	°C	IEC 60695-2-13
GWIT - thickness tested (2)	2	mm	-
Glow Wire Ignition Temperature (GWIT)	800	°C	IEC 60695-2-13
GWIT - thickness tested (3)	3	mm	-
<b>ASTM Data</b>			
DTUL @ 66 psi	155	°C	ASTM D 648
DTUL @ 264 psi	140	°C	ASTM D 648

**NORYL™ Resin N300X - Americas**

(PPE+PS)

Saudi Basic Industries Corporation (SABIC)

<b>Electrical properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
<b>ASTM Data</b>			
Dielectric Strength, Short Time	<b>19.4</b>	kV/mm	ASTM D 149
Dissipation Factor, 60 Hz	<b>0.0031</b>	-	ASTM D 150
Dissipation Factor, 1 MHz	<b>0.009</b>	-	ASTM D 150
Dielectric Constant, 60 Hz	<b>2.68</b>	-	ASTM D 150
Dielectric Constant, 1 MHz	<b>2.63</b>	-	ASTM D 150
Surface Resistivity	<b>&gt;1E15</b>	Ohm	ASTM D 257
Volume Resistivity	<b>&gt;1E15</b>	Ohm*cm	ASTM D 257

<b>Other properties</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Density	<b>1100</b>	kg/m <sup>3</sup>	ASTM D 792

<b>Processing Recommendation Injection Molding</b>	<b>Value</b>	<b>Unit</b>	<b>Test Standard</b>
Pre-drying - Temperature	<b>110 - 120</b>	°C	-
Pre-drying - Time	<b>3 - 4</b>	h	-
Processing humidity	<b>≤0.02</b>	%	-
Melt temperature	<b>300 - 325</b>	°C	-
Mold temperature	<b>80 - 110</b>	°C	-
Zone 1	<b>265 - 315</b>	°C	-
Zone 2	<b>275 - 320</b>	°C	-
Zone 3	<b>290 - 325</b>	°C	-
Screw speed	<b>20 - 100</b>	rpm	-
Back pressure	<b>0.3 - 0.7</b>	MPa	-

**Characteristics****Processing**

Injection Molding

**Special Characteristics**

Flame retardant

**Additives**

Flame retarding agent

**Regional Availability**

North America